

INTERNATIONAL SEARCH REPORT

Int. Patent Application No
PCT/GB 00/00680

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K14/34 C12P21/02 C12N15/31 A61P35/00 //C12R1:16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07K C12P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 925 792 A (RAPPUOLI RINO) 15 May 1990 (1990-05-15)	1-3, 5-8, 10, 23-25
Y	column 5, line 7 - line 30; claims 1-3; example 3	4, 13-19, 21, 25-28
Y	US 5 728 383 A (YOULE RICHARD J ET AL) 17 March 1998 (1998-03-17)	4, 25-28
A	column 10, line 55 - column 12, line 49; claims 1-12; tables 3, 4	20
X	RAPPUOLI ET AL.: "Rapid purification of diphtheria toxin by phenyl sepharose and DEAE cellulose chromatography" JOURNAL OF CHROMATOGRAPHY, vol. 268, 1983, pages 543-548, XP002140797	11, 12
Y	page 543 - page 544	13-19, 21
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

23 June 2000

Date of mailing of the international search report

10/07/2000

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WEN ET AL.: "Diphtheria toxin-related alpha-melanocyte-stimulating hormone fusion toxin" THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 266, no. 19, 5 July 1991 (1991-07-05), pages 12289-12293, XP002140798 page 12290, column 1 -column 2; figures 2,3</p> <p>-----</p>	<p>1-3,9, 22-25</p>

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International Application No. PCT/GB 00 00680

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-10 completely 13-22,24 partially

A method for the production of diphtheria toxin by a microorganism, comprising adding glucose to a growing culture, preferably with 0.5-1.5 % yeast extract and with the pH maintained between 7.0 and 7.5. The above mentioned method where the diphtheria toxin is mutated, has a cytotoxic A subunit and preferably is CRM107.

2. Claims: 11,12,23 completely, 13-22,24 partially

A method of purifying diphtheria toxin from a culture of toxin producing bacteria, said method comprising contacting a toxin containing preparation with subsequently with an ion exchange matrix and a hydrophobic matrix. Diphtheria toxin produced by the above mentioned method. Diphtheria toxin having a purity of at least 98%

3. Claims: 25-28 completely

A method of preparing a diphtheria toxin conjugate comprising conjugating a diphtheria toxin with a cell specific binding or targeting moiety, preferably transferrin. Use of the above mentioned diphtheria toxin conjugate in the manufacture of a medicament. A method of treatment of CNS neoplasm comprising administering to a subject a diphtheria toxin conjugate.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Jonal Application No

PCT/GB 00/00680

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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